

Development of a novel stem-cell based carrier for intravenous delivery of oncolytic viruses

Grant Award Details

Development of a novel stem-cell based carrier for intravenous delivery of oncolytic viruses

Grant Type: Quest - Discovery Stage Research Projects

Grant Number: DISC2-13221

Investigator:

Name:	Edward Filardo
Institution:	Cytonus Therapeutics, Inc.
Type:	PI

Award Value: \$899,342

Status: Pre-Active

Grant Application Details

Application Title: Development of a novel stem-cell based carrier for intravenous delivery of oncolytic viruses

Public Abstract: **Research Objective**

Develop a stem cell-based platform that safely and efficiently delivers viruses that specifically kill tumor cells and restore immune activity in patients with advanced cancer.

Impact

Overcome the inherent limitations that prevent efficient intravenous delivery of tumor killing viruses to metastatic tumors.

Major Proposed Activities

- Compare the relative efficacy of native or cargocyte-delivered oVSV-GFPΔM51-GFP to home to, and infect, metastatic breast cancer cells.
- Compare the relative efficacy of native or cargocyte-delivered oVSVΔM51-GFP to exit tumor blood vessels and escape neutralizing antibodies.
- Compare the relative efficacy of native versus cargocyte -delivered oVSVΔM51-GFP to specifically infect tumor tissue versus nonmalignant tissue
- Compare the relative efficacy of native versus cargocyte-delivered oVSVΔM51-IFNβ to promote objective breast tumor regression and reduce overall metastatic load
- Compare the relative efficacy of native versus cargocyte-delivered oVSVΔM51-IFNβ to break cancer-induced immune tolerance

Statement of Benefit to California: If successful, this proposal will provide the necessary data that will enable the design of clinical trials for improved delivery of tumor killing viruses for the treatment of nonresectable, recurrent, or metastatic solid tumors using stem cell-derived biocarriers.

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